

## **Remarks**

Claims 1-21 and 27-38 are pending. Referring to the Office Action Summary, responsive to communication filed 10 January 2005, claims 1-21 have been allowed and claims 27-34 have been rejected. No mention is made of the status of remaining pending claims 35-38. Applicant requests the Examiner communicate the status of these pending claims in the response to this communication.

Referring to the Examiners notation regarding the listing of references cited in the International Preliminary Examination Report (IPER), the references cited in the IPER were submitted with Information Disclosure Statements filed May 28<sup>th</sup>, 2002 and July 16, 2003. Therefore both references should be listed on the front of any patent issuing from this application.

While on the subject of Information Disclosure Statements, applicant has not received initialed Information Disclosure Statements dated May 28, 2002 and July 16, 2003, as well as the Supplemental Information Disclosure Statements dated July 28, 2003, August 25, 2003, and/or February 13, 2004 (copies enclosed for ease of reference). Applicant requests the Examiner review the cited references and initial such statements prior to issuing an anticipated notice of allowance.

Turning now to the rejections of the claims, as indicated by the office action, claims 27-34 stand rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for pentafluoroethane and chloropentafluoroethane, does not reasonably provide enablement for the claimed "halogenated hydrocarbon" and "halocarbon". The Examiner has opined that the "claims encompass infinite numbers of compounds falling within the halogenated hydrocarbons and halocarbons,

whereas the specification merely recites the specific pentafluoroethane and chloropentafluoroethane"

The enablement requirement refers to the requirement of 35 U.S.C. 112, first paragraph that the specification describe how to make and how to use the invention. The invention that one skilled in the art must be enabled to make and use is that defined by the claim(s) of the particular application or patent. *MPEP § 2164*. Any analysis of whether a particular claim is supported by the disclosure in an application requires a determination of whether that disclosure, when filed, contained sufficient information regarding the subject matter of the claims as to enable one skilled in the pertinent art to make and use the claimed invention. *Id.* The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? That standard is still the one to be applied. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is "undue." These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;

- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

It is improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors while ignoring one or more of the others. The examiner's analysis must consider all the evidence related to each of these factors, and any conclusion of nonenablement must be based on the evidence as a whole. 858 F.2d at 737, 740, 8 USPQ2d at 1404, 1407. The determination that "undue experimentation" would have been needed to make and use the claimed invention is not a single, simple factual determination. *Id.*

Both independent claims 27 and 29 recite, in pertinent part, providing a near-azeotropic mixture having at least one halogenated hydrocarbon and at least one halocarbon. At least one exemplary embodiment is described in the specification as an "innovative process for producing hydrofluorocarbons by separating mixtures of near-azeotropic halogenated hydrocarbons with extracting agents and subsequently converting the extracting agent to a derivative compound that can be separated from at least one of the halogenated hydrocarbons." (see e.g., pg. 13 of the specification).

Exemplary near-azeotropic mixtures include those having pentafluoroethane and chloropentafluoroethane. (see e.g., pg 14 of the specification).

The first analytical step requires that the examiner determine exactly what subject matter is encompassed by the claims. See, e.g., *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244, 68 USPQ2d 1280, 1287 (Fed. Cir. 2003). The examiner should determine what each claim recites and what the subject matter is when the claim is considered as a whole. (MPEP § 2164.08).

[T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts. *Id.* When analyzing the enabled scope of a claim, the teachings of the specification must not be ignored because claims are to be given their broadest reasonable interpretation that is consistent with the specification. "That claims are interpreted in light of the specification does not mean that everything in the specification must be read into the claims." *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957, 220 USPQ 592, 597 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 835 (1984).

Claims 27 and 29 specifically recite near-azeotropic mixtures having at least one halogenated hydrocarbon and at least one halocarbon. This specific recitation of near-azeotropic mixtures cannot be ignored when determining the enablement of these claims for at least the reason the entirety of the claim must be considered when determining enablement. When properly considered, the scope of the mixture recited in claims 27 and 29 is not "infinite" as the Examiner opines because the mixtures are

near-azeotropic mixtures as well as mixtures having at least one halogenated hydrocarbon and a least one halocarbon.

Whether the specification would have been enabling as of the filing date involves consideration of the nature of the invention, the state of the prior art, and the level of skill in the art. (MPEP § 2164.05).

Exemplary embodiments of the specification broadly describe separating mixtures of near-azeotropic halogenated hydrocarbons with extracting agents. In view of the broad teachings of the specification a person of ordinary skill in the chemical arts will be able to practice the invention as recited in claims 27 and 29.

The scope of the required enablement varies inversely with the degree of predictability involved, but even in unpredictable arts, a disclosure of every operable species is not required. (MPEP § 2164.03). In cases involving unpredictable factors, such as most chemical reactions and physiological activity, more may be required. *In re Fisher*, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). Claims 27 and 29 recite near-azeotropic mixtures, not the infinite number of mixtures referred to by the Examiner. As such, claims 27 and 29 recite subject matter supported by an exemplary embodiment such as the pentafluoroethane/chloropentafluoroethane mixture described in the specification. This disclosure is sufficient to support the processing of the near-azeotropic mixture recited in claims 27 and 29 when the specification, specifically the numerous examples given in the specification, are considered as a whole.

Therefore, when the scope of claims 27 and 29 are properly considered, the specification enables a person of ordinary skill in the chemical arts to practice recited limitations without undue experimentation in compliance with 35 USC § 112, 1<sup>st</sup>

paragraph. For at least the reason claims 28 and 31-34, as well as 30 and 35-38 depend from claims 27 and 29 respectively, they are enabled as well. Applicant requests Examiner withdraw this rejection in the next action or provide the required specifics indicating the maintenance of the rejection.

Claims 27-28 have also been rejected under 35 U.S.C. 103(a) as being unpatentable over GB-A 10 13 991 ('991) in view of Vollmueller et al ('392) (the '991/'392 combination), while claims 29-34 are allowed over the prior art of record. The office action indicates that claims 27 and 28 are obvious because the '991 reference describes providing and distilling the near-azeotropic mixture in presence of hexafluoropropene as recited in claim 27, and the '392 reference describes the converting the hexafluoropropene to a derivative compound as recited in claim 27. However, the office action fails to establish the required motivation for the '991/'392 combination.

While obviousness can be established by a combination of references, obviousness cannot be established unless there is some motivation in the art to support the combination. *See, ACH Hospital Systems, Inc. v. Montifior Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984) ("Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination"). The motivation for forming the combination must be something other than hindsight reconstruction based on using Applicants' invention as a road map for such combination. *See, e.g., Interconnect Planning Corp. v. Veil*, 227 USPQ 543, 551 (Fed. Cir. 1985); *In re Mills*, 16 USPQ.2d 1430 (Fed. Cir. 1990) (explaining that hindsight reconstruction is an improper

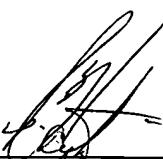
basis for rejection of a claim). Also, the mere fact that the prior art can be modified does not make the modification obvious "unless the prior art suggested the desirability of the modification." *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

With reference to claim 27, the Applicants disclosure provides the only motivation of record for the '991/'392 combination and the disclosure of the Applicant cannot be relied upon to support such a combination for at least the reason such support amounts to improper hindsight reconstruction. For at least the reason no motivation exists to combine the '991 and '392 references, claim 27 is allowable in view of the cited references. Claims 28 and 30-34 depend from claim 27 and are allowable for at least the reasons stated above with regard to claim 27.

Claims 1-21 and 27-38 are in immediate condition for allowance. Applicant requests allowance of claims 1-21 and 27-38 in the Examiner's next action. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the Examiner is requested to contact the undersigned at (509) 624-4276 between the hours of 8 and 5 (PST).

Respectfully submitted,

Dated: 7/4/05

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